(c) *Labeling.* The label of the color additive shall conform to the requirements of § 70.25 of this chapter.

(d) *Certification.* All batches of Ext. D&C Yellow No. 7 shall be certified in accordance with regulations in part 80 of this chapter.

§ 74.2708 D&C Yellow No. 8.

(a) *Identity and specifications.* The color additive D&C Yellow No. 8 shall conform in identity and specifications to the requirements of § 74.1708(a)(1) and (b).

(b) *Uses and restrictions.* D&C Yellow No. 8 may be safely used for coloring externally applied cosmetics in amounts consistent with good manufacturing practice.

(c) *Labeling.* The label of the color additive shall conform to the requirements of § 70.25 of this chapter.

(d) *Certification.* All batches of D&C Yellow No. 8 shall be certified in accordance with regulations in part 80 of this chapter.

§ 74.2710 D&C Yellow No. 10.

(a) *Identity and specifications.* The color additive D&C Yellow No. 10 shall conform in identity and specifications to the requirements of § 74.1710(a)(1) and (b).

(b) *Uses and restrictions.* The color additive D&C Yellow No. 10 may be safely used for coloring cosmetics generally in amounts consistent with current good manufacturing practice.

(c) *Labeling.* The label of the color additive shall conform to the requirements of § 70.25 of this chapter.

(d) *Certification.* All batches of D&C Yellow No. 10 shall be certified in accordance with regulations in part 80 of this chapter.

[48 FR 39220, Aug. 30, 1983, as amended at 49 FR 8432, Mar. 7, 1984]

§ 74.2711 D&C Yellow No. 11.

(a) *Identity and specifications.* The color additive D&C Yellow No. 11 shall conform in identity and specifications to the requirements of § 74.1711(a)(1) and (b).

(b) *Uses and restrictions.* D&C Yellow No. 11 may be safely used for coloring externally applied cosmetics in amounts consistent with good manufacturing practice.

(c) *Labeling.* The label of the color additive shall conform to the requirements of § 70.25 of this chapter.

(d) *Certification.* All batches of D&C Yellow No. 11 shall be certified in accordance with regulations in part 80 of this chapter.

Subpart D—Medical Devices

§ 74.3045 [Phthalocyaninato(2-)] copper.

(a) *Identity.* The color additive is [phthalocyaninato(2-)] copper (CAS Reg. No. 147–14–8) having the structure shown in Colour Index No. 74160.

(b) *Specifications.* The color additive [phthalocyaninato(2-)] copper shall conform to the following specifications and shall be free from impurities other than those named to the extent that such impurities may be avoided by current good manufacturing practice:

Volatile matter 135 °C (275 °F), not more than 0.3 percent.
Salt content (as NaCl), not more than 0.3 percent.
Alcohol soluble matter, not more than 0.5 percent.
Organic chlorine, not more than 0.5 percent.
Aromatic amines, not more than 0.05 percent.
Lead (as Pb), not more than 40 parts per million.
Arsenic (as As), not more than 3 parts per million.
Mercury (as Hg), not more than 1 part per million.
Total color, not less than 98.5 percent.

(c) *Uses and restrictions.* (1) The color additive [phthalocyaninato(2-)] copper may be safely used to color polypropylene sutures, polybutester (the generic designation for the suture fabricated from 1,4-benzenedicarboxylic acid, polymer with 1,4-butanediol and *alpha*-hydro-*omega*- hydroxypoly(oxy-1,4-butanediyl), CAS Reg. No. 37282–12–5) nonabsorbable sutures for use in general and ophthalmic surgery, polybutylene terephthalate nonabsorbable monofilament sutures for general and ophthalmic surgery, nonabsorbable sutures made from poly(vinylidene fluoride) and poly(vinylidene fluoride-co-hexafluoropropylene) for general and ophthalmic surgery, and polymethylmethacrylate monofilament used as supporting

haptics for intraocular lenses, subject to the following restrictions:

(i) The quantity of the color additive does not exceed 0.5 percent by weight of the suture or haptic material.

(ii) The dyed suture shall conform in all respects to the requirements of the U.S. Pharmacopeia.

(2) The color additive [phthalocyaninato(2-)] copper may be safely used for coloring contact lenses in amounts not to exceed the minimum reasonably required to accomplish the intended coloring effect.

(3) Authorization for these uses shall not be construed as waiving any of the requirements of section 510(k), 515, or 520(g) the Federal Food, Drug, and Cosmetic Act with respect to the medical device in which [phthalocyaninato(2-)] copper is used.

(d) *Labeling.* The label of the color additive shall conform to the requirements of § 70.25 of this chapter.

(e) *Certification.* All batches of [phthalocyaninato (2-)] copper shall be certified in accordance with regulations in part 80 of this chapter.

[48 FR 34947, Aug. 2, 1983, as amended at 50 FR 16228, Apr. 25, 1985; 51 FR 22929, June 24, 1986; 51 FR 28930, Aug. 13, 1986; 51 FR 39371, Oct. 28, 1986; 52 FR 15945, May 1, 1987; 55 FR 19620, May 10, 1990; 64 FR 23186, Apr. 30, 1999]

§ 74.3102 FD&C Blue No. 2.

(a) *Identity.* The color additive FD&C Blue No. 2 shall conform in identity to the requirements of § 74.102(a)(1).

(b) *Specifications.* (1) The color additive FD&C Blue No. 2 for use in coloring surgical sutures shall conform to the following specifications and shall be free from impurities other than those named to the extent that such impurities may be avoided by current good manufacturing practice:

Sum of volatile matter at 135 °C (275 °F) and chlorides and sulfates (calculated as sodium salts), not more than 15 percent.
Water insoluble matter, not more than 0.4 percent.
Isatin-5-sulfonic acid, not more than 0.4 percent.
Isomeric colors, not more than 18 percent.
Lower sulfonated subsidiary colors, not more than 5 percent.
Lead (as Pb), not more than 10 parts per million.
Arsenic (as As), not more than 3 parts per million.
Total color, not less than 85 percent.

(2) The color additive FD&C Blue No. 2–Aluminum Lake on alumina for use in bone cement shall be prepared in accordance with the requirements of § 82.51 of this chapter.

(c) *Uses and restrictions.* (1) The color additive FD&C Blue No. 2 may be safely used for coloring nylon (the copolymer of adipic acid and hexamethylene diamine) surgical sutures for use in general surgery subject to the following restrictions:

(i) The quantity of color additive does not exceed 1 percent by weight of the suture;

(ii) The dyed suture shall conform in all respects to the requirements of the United States Pharmacopeia XX (1980); and

(iii) When the sutures are used for the purposes specified in their labeling, the color additive does not migrate to the surrounding tissues.

(2) The color additive FD&C Blue No. 2–Aluminum Lake on alumina may be safely used for coloring bone cement at a level not to exceed 0.1 percent by weight of the bone cement.

(3) Authorization and compliance with these uses shall not be construed as waiving any of the requirements of sections 510(k), 515, and 520(g) of the Federal Food, Drug, and Cosmetic Act with respect to the medical device in which the color additive FD&C Blue No. 2 and the color additive FD&C Blue No. 2–Aluminum Lake on alumina are used.

(d) *Labeling.* The labels of the color additive FD&C Blue No. 2 and the color additive FD&C Blue No. 2–Aluminum Lake on alumina shall conform to the requirements of § 70.25 of this chapter.

(e) *Certification.* All batches of FD&C Blue No. 2 and its lake shall be certified in accordance with regulations in part 80 of this chapter.

[64 FR 48290, Sept. 3, 1999]

§ 74.3106 D&C Blue No. 6.

(a) *Identity.* The color additive D&C Blue No. 6 is principally [$\Delta^{2,2'}$-biindoline]-3,3′ dione (CAS Reg. No. 482–89–3).

(b) *Specifications.* D&C Blue No. 6 shall conform to the following specifications and shall be free from impurities other than those named to the extent that such impurities may be avoided by good manufacturing practice:

Volatile matter at 135 °C (275 °F), not more than 3 percent.
Matter insoluble in *N,N*-dimethylformamide, not more than 1 percent.
Isatin, not more than 0.3 percent.
Anthranilic acid, not more than 0.3 percent.
Indirubin, not more than 1 percent.
Lead (as Pb), not more than 10 parts per million.
Arsenic (as As), not more than 3 parts per million.
Mercury (as Hg), not more than 1 part per million.
Total color, not less than 95 percent.

(c) *Uses and restrictions.* (1) D&C Blue No. 6 may be safely used at a level—

(i) Not to exceed 0.2 percent by weight of the suture material for coloring polyethylene terephthalate surgical sutures for general surgical use;

(ii) Not to exceed 0.25 percent by weight of the suture material for coloring plain or chromic collagen absorbable sutures for general surgical use;

(iii) Not to exceed 0.5 percent by weight of the suture material for coloring plain or chromic collagen absorbable sutures for ophthalmic surgical use;

(iv) Not to exceed 0.5 percent by weight of the suture material for coloring polypropylene surgical sutures for general surgical use; and

(v) Not to exceed 0.5 percent by weight of the suture material for coloring polydioxanone synthetic absorbable sutures for ophthalmic and general surgical use.

(2) Authorization for these uses shall not be construed as waiving any of the requirements of sections 510(k), 515, and 520(g) of the Federal Food, Drug, and Cosmetic Act with respect to the medical device in which the color additive is used.

(d) *Labeling.* The label of the color additive shall conform to the requirements of § 70.25 of this chapter.

(e) *Certification.* All batches of D&C Blue No. 6 shall be certified in accordance with regulations in part 80 of this chapter.

[49 FR 29956, July 25, 1984; 49 FR 34447, Aug. 31, 1984, as amended at 50 FR 30698, July 29, 1985]

§ 74.3206 D&C Green No. 6.

(a) *Identity.* The color additive D&C Green No. 6 shall conform in identity to the requirements of § 74.1206(a).

(b) *Specifications.* The color additive D&C Green No. 6 for use in medical devices shall conform to the specifications of § 74.1206(b).

(c) *Uses and restrictions.* (1) The color additive D&C Green No. 6 may be safely used at a level

(i) Not to exceed 0.03 percent by weight of the lens material for coloring contact lenses;

(ii) Not to exceed 0.75 percent by weight of the suture material for coloring polyethylene terephthalate surgical sutures, including sutures for ophthalmic use;

(iii) Not to exceed 0.1 percent by weight of the suture material for coloring polyglycolic acid surgical sutures with diameter greater than U.S.P. size 8–0, including sutures for ophthalmic use;

(iv) Not to exceed 0.5 percent by weight of the suture material for coloring polyglycolic acid surgical sutures with diameter not greater than U.S.P. size 8–0, including sutures for ophthalmic use;

(v) Not to exceed 0.21 percent by weight of the suture material for coloring poly(glycolic acid-*co*-trimethylene carbonate) sutures (also referred to as 1,4-dioxan-2,5-dione polymer with 1,3-dioxan-2-one) for general surgical use; and

(vi) Not to exceed 0.10 percent by weight of the haptic material for coloring polymethylmethacrylate support haptics of intraocular lenses.

(2) Authorization for these uses shall not be construed as waiving any of the requirements of sections 510(k), 515, and 520(g) of the Federal Food, Drug, and Cosmetic Act with respect to the medical device in which D&C Green No. 6 is used.

(d) *Labeling.* The label of the color additive shall conform to the requirements of § 70.25 of this chapter.

(e) *Certification.* All batches of D&C Green No. 6 shall be certified in accordance with regulations in part 80 of this chapter.

[48 FR 13022, Mar. 29, 1983, as amended at 51 FR 9784, Mar. 21, 1986; 51 FR 37909, Oct. 27, 1986; 58 FR 21542, Apr. 22, 1993]

§ 74.3230 D&C Red No. 17.

(a) *Identity and specifications.* The color additive D&C Red No. 17 shall conform in identity and specifications to the requirements of § 74.1317(a)(1) and (b).

(b) *Uses and restrictions.* (1) The substance listed in paragraph (a) of this section may be used as a color additive in contact lens in amounts not to exceed the minimum reasonably required to accomplish the intended coloring effect.

(2) Authorization for this use shall not be construed as waiving any of the requirements of section 510(k), 515, and 520(g) of the Federal Food, Drug, and Cosmetic Act with respect to the contact lens in which the color additive is used.

(c) *Labeling.* The label of the color additive shall conform to the requirements of § 70.25 of this chapter.

(d) *Certification.* All batches of D&C Red No. 17 shall be certified in accordance with regulations in part 80 of this chapter.

[55 FR 22898, June 5, 1990]

§ 74.3602 D&C Violet No. 2.

(a) *Identity and specifications.* The color additive D&C Violet No. 2 shall conform in identity and specifications to the requirements of § 74.1602(a)(1) and (b).

(b) *Uses and restrictions.* (1) The color additive, D&C Violet No. 2, may be safely used for coloring contact lenses in amounts not to exceed the minimum reasonably required to accomplish the intended coloring effect.

(2) D&C Violet No. 2 may be safely used for coloring sutures for use in surgery subject to the following conditions:

(i) At a level not to exceed 0.2 percent by weight of the suture material for coloring copolymers of 90 percent glycolide and 10 percent L-lactide synthetic absorbable sutures for use in general and ophthalmic surgery; and

(ii) At a level not to exceed 0.3 percent by weight of the suture material for coloring polydioxanone synthetic absorbable sutures for use in general and ophthalmic surgery.

(iii) At a level not to exceed 0.25 percent by weight of the suture material for coloring poliglecaprone 25 (ε-caprolactone/glycolide copolymer) synthetic absorbable sutures for use in general surgery.

(iv) At a level not to exceed 0.1 percent by weight of the suture material for coloring poly(ε-caprolactone) absorbable sutures for use in general surgery.

(v) At a level not to exceed 0.2 percent by weight of the suture material for coloring glycolide/dioxanone/trimethylene carbonate tripolymer absorbable sutures for use in general surgery.

(vi) At a level not to exceed 0.2 percent by weight of the suture material for coloring absorbable sutures prepared from homopolymers of glycolide for use in general surgery.

(3) The color additive, D&C Violet No. 2, may be safely used for coloring polymethylmethacrylate intraocular lens haptics at a level not to exceed 0.2 percent by weight of the haptic material.

(4) The color additive, D&C Violet No. 2, may be safely used for coloring absorbable meniscal tacks made from poly (L-lactic acid) at a level not to exceed 0.15 percent by weight of the tack material.

(5) Authorization for these uses shall not be construed as waiving any of the requirements of sections 510(k), 515, and 520(g) of the Federal Food, Drug, and Cosmetic Act with respect to the medical devices in which the color additive is used.

(c) *Labeling.* The label of the color additive shall conform to the requirements of § 70.25 of this chapter.

(d) *Certification.* All batches of D&C Violet No. 2 shall be certified in accordance with regulations in part 80 of this chapter.

[52 FR 19722, May 27, 1987, as amended at 55 FR 18868, May 7, 1990; 58 FR 60109, Nov. 15, 1993; 59 FR 11720, Mar. 14, 1994; 63 FR 20098, Apr. 23, 1998; 64 FR 32805, June 18, 1999; 65 FR 46344, July 28, 2000]

§ 74.3710 D&C Yellow No. 10.

(a) *Identity.* The color additive D&C Yellow No. 10 shall conform to the identity requirements of § 74.1710(a).

(b) *Specifications.* The color additive D&C Yellow No. 10 for use in contact lenses shall conform to the specifications of § 74.1710(b).

(c) *Uses and restrictions.* (1) The color additive D&C Yellow No. 10 may be used for coloring contact lenses in amounts not to exceed the minimum reasonably required to accomplish the intended coloring effect.

(2) Authorization for this use shall not be construed as waiving any of the requirements of sections 510(k), 515, and 520(g) of the Federal Food, Drug, and Cosmetic Act with respect to the contact lens in which the color additive is used.

(d) *Labeling.* The label of the color additive shall conform to the requirements of § 70.25 of this chapter.

(e) *Certification.* All batches of D&C Yellow No. 10 shall be certified in accordance with regulations in part 80 of this chapter.

[52 FR 28690, Aug. 3, 1987]

APPENDIX A TO PART 74—THE PROCEDURE FOR DETERMINING ETHER SOLUBLE MATERIAL IN D&C RED NOS. 6 AND 7

The dye is dissolved in glacial acetic and 8 *N* hydrochloric acids (1.33:1) and extracted with diethyl ether. Sulfonated moieties, including the color additive, are discarded in subsequent aqueous extractions of the ether. Carboxylated moieties are removed from the ether by extraction with 2% (w/w) NaOH. The ether is evaporated to near dryness, ethanol (95%) is added, and the solution is analyzed spectrophotometrically in the visible range. The absorbance at each wavelength must not exceed 150% of the absorbance similarly obtained for D&C Red No. 6 Lot AA5169.

APPARATUS

(A) Spectrophotometer (Cary 118 or equivalent).

(B) Separatory funnels—one 1000 mL and one 500 mL.

REAGENTS

NOTE: Use *distilled* water when water is required.

(A) Glacial Acetic Acid (ACS grade).

(B) Diethyl ether (Anhydrous)—Note and follow safety precautions on container.

(C) 8 *N* HCl—Pour 165 mL H_2O into a 500 mL graduate. Place the graduate in hood, then add HCl conc. to bring to volume. Carefully pour this solution into a 500 mL Erlenmeyer flask, Stopper and shake. Label the flask.

(D) 2% (w/w) NaOH—Pour ca 190 mL H_2O into a 250 mL mixing graduate. Add 8 g. (5.23 mL) of 50% (w/w) NaOH, bring to 200 mL volume with water, stopper and mix. Pour this solution into a glass bottle, label and stopper with a polytetrafluoroethylene top.

(E) Ethanol (95%).

PROCEDURE

Weigh a 250 mL beaker to tenths of a mg and add 100 mg of dye. Record weight to tenths of a mg.

NOTE: The following work must be performed in the hood.

Add 75 mL of 8 *N* HCl and 100 mL of glacial acetic acid to the beaker and stir.

Place the beaker on a hot plate and heat with stirring, until all of the dye is in solution.

Remove the beaker from the hot plate, cover with a watch glass and allow to cool to room temperature (1–2 hrs).

When the dye solution is at room temperature, transfer the solution to a 1000 mL separatory funnel.

Rinse the beaker three times with 50 mL portions of H_2O, transferring each rinse to the 1000 mL funnel.

Add 150 mL of ether to the funnel, stopper and shake for 10 seconds, then invert funnel and open stopcock to remove gas buildup.

Shake the funnel for one minute, opening the stopcock a few times while the funnel is inverted to remove gas buildup. (Use this shake procedure throughout method.)

Allow the funnel to stand until the layers have separated.

Transfer the bottom (aqueous) layer to a 500 mL separatory funnel, add 100 mL of ether, stopper and shake for one minute.

When the layers have separated, drain off the bottom layer into a waste beaker.

Pour the ether layer in the 500 mL separatory funnel into the 1000 mL separatory funnel.

Rinse the 500 mL sep. funnel with 100 mL H_2 O, then transfer it to the 1000 mL sep. funnel, stopper and shake for one minute.